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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,473	07/08/2002	Erwin Hauser	SMB-PT042 (PC 00 396 B US	3369
3624	7590	01/09/2004	EXAMINER KERSHTEYN, IGOR	
VOLPE AND KOENIG, P.C. UNITED PLAZA, SUITE 1600 30 SOUTH 17TH STREET PHILADELPHIA, PA 19103			ART UNIT 3745	

DATE MAILED: 01/09/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n No.

10/069,473

Applicant(s)

HAUSER ET AL.

Examiner

Igor Kershteyn

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 13-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1, 13, 14, 19, 20 and 23 is/are rejected.
- 7) ☒ Claim(s) 15-18, 21 and 22 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 July 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4. 6) ☐ Other: _____

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "a multistage pump of pumping facility", as claimed in claim 20 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities:

The specification does not contain section headings,

In page 5, lines 17-18 ", especially with the characteristics of claim 1" should be deleted because claims should not be mentioned in the specification.

Appropriate correction is required.

Claim Objections

Claims 13 and 14 are objected to because of the following informalities:

Claim 13 recites the limitation "the pump inlet" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 14 recites the limitation "the pump inlet" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 13-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, in line 8, recites the limitation "the working membrane" which is indefinite because it is unclear either it is a new limitation or it is either one of the operating membrane or the supplemental membrane.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 13, 14, and 19, as far as they are definite) are rejected under 35 U.S.C. 102(b) as being anticipated by French Patent No. 2273961.

In figure 3, French Patent teaches a membrane pump 1 with an operating membrane 13 delimiting a conveying space 2, and a supplemental membrane 15 facing

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away from the conveying space 2, a membrane interspace 14 provided between operating membrane 13 and supplemental membrane 15 and a pump drive 12 connected to the operating and the supplemental membranes 13,15 for oscillating movement in the same direction, whereby the membrane interspace 14 is connected with at least one suction channel 8 in order to evacuate and assimilate a pressure condition in the membrane interspace 14 on one side and the conveying space 2 on the other side, and whereby the working membrane 13 is stretched to the top and bottom dead center points of its oscillating movements.

Claims 1, 13, 14, 19, and 20, as far as they are definite, are rejected under 35 U.S.C. 102(b) as being anticipated by French Patent No. 1292254.

In figures 1 and 2, French Patent teaches a membrane pump 1 with an operating membrane 7 delimiting a conveying space 21, and a supplemental membrane 6 facing away from the conveying space 21, a membrane interspace 26 provided between operating membrane 7 and supplemental membrane 6 and a pump drive 2 connected to the operating and the supplemental membranes 7,6 for oscillating movement in the same direction, whereby the membrane interspace 26 is connected with at least one suction channel 19 in order to evacuate and assimilate a pressure condition in the membrane interspace 26 on one side and the conveying space 21 on the other side, and whereby the working membrane 7,6 is stretched to the top and bottom dead center points of its oscillating movements.

Claims 1 and 19, as far as they are definite, are rejected under 35 U.S.C. 102(b) as being anticipated by Finney (2,414,806).

In figure 2, Finney teaches a membrane pump with an operating membrane 23 delimiting a conveying space 52, and a supplemental membrane 22 facing away from the conveying space 52, a membrane interspace 21 provided between operating membrane 23 and supplemental membrane 22 and a pump drive 41 connected to the operating and the supplemental membranes 23,22 for oscillating movement in the same direction, whereby the membrane interspace 21 is connected with at least one suction channel 19 in order to evacuate and assimilate a pressure condition in the membrane interspace 21 on one side and the conveying space 52 on the other side, and whereby the working membrane 23 is stretched to the top and bottom dead center points of its oscillating movements.

Claims 1 and 19, as far as they are definite, are rejected under 35 U.S.C. 102(b) as being anticipated by Merkle (3,027,848).

In figures 1 and 2, Merkle teaches a membrane pump 2 with an operating membrane 44 delimiting a conveying space 80, and a supplemental membrane 52 facing away from the conveying space 80, a membrane interspace 64 provided between operating membrane 44 and supplemental membrane 52 and a pump drive 34 connected to the operating and the supplemental membranes 44,52 for oscillating movement in the same direction, whereby the membrane interspace 64 is connected with at least one suction channel 66 in order to evacuate and assimilate a pressure

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condition in the membrane interspace 64 on one side and the conveying space 80 on the other side, and whereby the working membrane is stretched to the top and bottom dead center points of its oscillating movements.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 23 rejected under 35 U.S.C. 103(a) as being unpatentable over Finney (2,414,806) as applied to claim 1 above, and further in view of Hagen et al. (4,086,036).

Finney teaches all the claimed subject matter except that he doesn't teach the operating membrane being configured as a molded membrane.

Hagen et al. in column 4, lines 23-25, teaches a membrane pump having the operating membrane 63 being configured as a molded membrane.

Since Finney and Hagen et al. are analogous art because they are from the same field of endeavor, that is the membrane pump art, and because Finney doesn't teach the method the membrane was made, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to utilize the molding method as taught by Hagen et al. for the purpose of making membrane of Finney.

Allowable Subject Matter

Claims 15-18, 21 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Prior Art

Prior art made of record but not relied upon is considered pertinent to Applicant's disclosure and consist of two patent.

Temple (3,387,566) is cited to show a pump having two diaphragms and interspace but fails to teach the interspace connected to suction channel.

Ray (3,692,437) is cited to show a pump having two diaphragms and interspace but fails to teach the interspace connected to suction channel.

Nagano et al. (4,286,932) is cited to show a diaphragm pump having a pair of diaphragms but none of the diaphragms is a supplemental diaphragm.

Contact information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Kershteyn whose telephone number is (703) 308 8317. The examiner can be reached on Monday-Friday from 8:00 a.m. to 4:30 p.m.

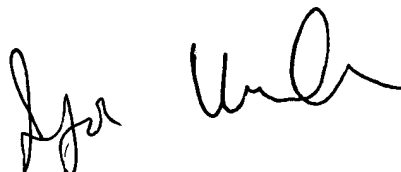
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look, can be reached on (703) 308 1044. The fax number is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308 0861.

IK

January 2, 2004



Igor Kershteyn
Patent examiner.
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EDWARD K. LOOK
SUPERVISORY PATENT EXAMINER
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1/6/04